may be, for example, a larger device such as a cell phone, smart phone, flip-phone, PDA, graphic pad, or even larger devices such as a laptop computer, an automobile, and the like.

[0177] In an example embodiment of the invention, an apparatus comprises:

[0178] means for transmitting, by an access node, a broadcast request message to one or more wireless terminal devices associated to a wireless network managed by the access node, to determine a distortion between a current channel estimate and the prior channel estimate and compare the determined distortion to a distortion threshold value included in the broadcast request message, the distortion threshold value being included in the broadcast request message or in another message generated by the access node;

[0179] means for receiving, by the access node from a subset of the one or more wireless terminal devices, one or more parallel or sequential acknowledgement messages indicating presence of the determined distortion greater than the distortion threshold value or indicating an inability to determine a distortion in channel estimates, only if the determined distortion is greater than the distortion threshold value or if there is an inability to determine a distortion in channel estimates; and

[0180] means for transmitting, by the access node, one or more polling request messages, only to the subset of the one or more wireless terminal devices, to send the current channel estimate to the access node.

[0181] In an example embodiment of the invention, an apparatus comprises:

[0182] means for storing, by a wireless device, a prior channel estimate that was previously transmitted to another wireless device in a wireless network;

[0183] means for receiving, by the wireless device, a request message from the other device, to determine a distortion between a current channel estimate and the prior channel estimate and compare the determined distortion to a distortion threshold value, the request message being a broadcast request message or a measurement request message and the distortion value being either included in the request message, received in another message, or a preconfigured value;

[0184] means for determining, by the wireless device, the distortion between the current channel estimate and the prior channel estimate and comparing the determined distortion to the distortion threshold value; and

[0185] means for transmitting, by the wireless device, one or more parallel or sequential messages to the other device, indicating presence of the determined distortion greater than the distortion threshold value or indicating an inability to determine a distortion in channel estimates.

[0186] Using the description provided herein, the embodiments may be implemented as a machine, process, or article of manufacture by using standard programming and/or engineering techniques to produce programming software, firmware, hardware or any combination thereof.

[0187] Any resulting program(s), having computer-readable program code, may be embodied on one or more computer-usable media such as resident memory devices, smart cards or other removable memory devices, or transmitting devices, thereby making a computer program product or article of manufacture according to the embodiments. As such, the terms "article of manufacture" and "computer program product" as used herein are intended to encompass a computer program that exists permanently or temporarily on any computer-usable non-transitory medium.

[0188] As indicated above, memory/storage devices include, but are not limited to, disks, optical disks, removable memory devices such as smart cards, SIMs, WIMs, semiconductor memories such as RAM, ROM, PROMS, etc. Transmitting mediums include, but are not limited to, transmissions via wireless communication networks, the Internet, intranets, telephone/modem-based network communication, hard-wired/cabled communication network, satellite communication, and other stationary or mobile network systems/communication links.

[0189] Although specific example embodiments of the invention have been disclosed, a person skilled in the art will understand that changes can be made to the specific example embodiments without departing from the spirit and scope of the invention.

1. A method, comprising:

transmitting, by an access node, a broadcast request message to one or more wireless terminal devices associated with a wireless network managed by the access node;

transmitting a distortion threshold value in at least one of the broadcast request message and another message;

receiving, by the access node from a subset of the one or more wireless terminal devices, one or more parallel or sequential acknowledgement messages each indicating presence of a determined distortion greater than the distortion threshold value or indicating an inability to determine a distortion in channel estimates, wherein each determined distortion indicates a change between a prior channel estimate and a current channel estimate that is estimated from the broadcast request message received by a respective wireless terminal device in the subset; and

transmitting, by the access node, one or more polling request messages, only to the subset of the one or more wireless terminal devices, indicating requests to send the current channel estimate from each respective wireless terminal device in the subset to the access node.

2. The method of claim **1**, wherein the broadcast request message is a null data packet announcement frame that includes the distortion threshold value, which is set by the access node.

3. The method of claim **1**, wherein the one or more parallel acknowledgement messages each include a transmission pattern having a Zadoff-Chu sequence identifying a sending wireless terminal device in the subset of the one or more wireless terminal devices.

4. The method of claim **3**, further comprising:

computing, by the access node, a Zadoff-Chu sequence detection algorithm operating on the Zadoff-Chu sequence received in each of the one or more parallel acknowledgement messages, to identify each wireless terminal devicein the subset.

5. The method of claim **1**, further comprising:

receiving by the access node, one or more messages from the subset of the one or more wireless terminal devices in response to the one or more polling request messages, wherein the one or more messages include the current channel estimate from each wireless terminal device in the subset.